

(year of marketing approval) of OADs. Using observations for 10 years and five regions, it was possible to estimate a multiple regression model explaining separately hospitalizations and hospital costs attributable to diabetes by regional fixed effects, “treated prevalence” and the average “vintage” of OADs. **RESULTS:** The results showed that the number of hospitalizations attributable to diabetes are proportional to the “treated prevalence”, all else constant, but that the more recent the OADs used (higher “vintage”), the lower are hospital admissions ($p=0.03$) and hospital costs ($p=0.007$). According to the model, if the average “vintage” of OADs had increased by one year, the number of admissions would have had a 3.8% reduction (3965 less episodes in 2009) and hospital costs would have suffered a 5.3% reduction (about 11 M€ in 2009). **CONCLUSIONS:** The possible influence of other difficult to quantify factors notwithstanding, our analysis suggests that in the last decade the availability of new OADs in the Portuguese market may have played a key role in the reduction of hospital costs and in-patient admissions attributable to diabetes.

PDB47

EFFECTS OF PATIENT-REPORTED NON-SEVERE HYPOGLYCAEMIA ON HEALTH CARE RESOURCE USE AND WORK-TIME LOSS IN SEVEN EUROPEAN COUNTRIES

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OBJECTIVES: Limited data exist on the use of health care resources due to hypoglycaemia induced by antidiabetic treatment. This study investigated the occurrence of self-reported non-severe hypoglycaemic events (NSHE) in type 1 (T1) and insulin-treated type 2 (T2) diabetes patients and their impact on health care resource use. **METHODS:** Insulin-treated T1 and T2 patients from Austria, Denmark, Finland, The Netherlands, Norway, Sweden and Switzerland were invited, primarily via online panels, to complete four questionnaires at weekly intervals. Data were collected on patient demographics, occurrence of NSHE in the last seven days and hypoglycaemia-related resource use. NSHE was defined as an event with symptoms of hypoglycaemia, with or without blood glucose measurement (BGM), or low BGM without symptoms, which the patient could manage without assistance. **RESULTS:** In total, 3958 patients with diabetes entered the study (57% completing all four questionnaires). T1 and T2 patients experienced a mean of 1.7 and 0.5 events/pt-week. Overall employment rate was 48%. Following the last NSHE, the proportion of patients contacting a health care professional was 8% among T2 patients (Austria: 10%, Denmark: 7%, Finland: 10%, Norway: 6%, The Netherlands: 8%, Sweden: 6%, Switzerland: 14%) and 2% among T1 patients (Austria: 3%, Denmark: 1%, Finland: 3%, Norway: 2%, The Netherlands: 3%, Sweden: 1%, Switzerland: 5%). There was a mean increase in BG test use in the week following the last NSHE of 1.9 across countries (Austria: 2.6, Denmark: 1.3, Finland: 2.1, The Netherlands: 2.0, Norway: 1.8, Sweden: 1.5, Switzerland: 1.9). Among employed patients, loss of work-time after the last hypoglycaemic event was reported by 10% (Austria: 10%, Denmark: 9%, Finland: 17%, The Netherlands: 11%, Norway: 9%, Sweden: 12%, Switzerland: 6%). Between countries the average work-time loss among those losing work-time ranged from 1.3 to 6.7 hours. **CONCLUSIONS:** NSHE were associated with use of health care resources and work-time loss in the countries studied.

PDB48

HEALTH CARE RESOURCES UTILIZATION AND COSTS ASSOCIATED WITH THE MANAGEMENT OF PATIENTS WITH ACROMEGALY: AN ANALYSIS BASED ON THE RAMQ DATABASE

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OBJECTIVES: To estimate the health care resource utilization and costs associated with the management of patients with acromegaly in Québec. **METHODS:** A retrospective cohort study was conducted using data from the Quebec public health plan (RAMQ) for the period from January 2001 to June 2011. Patients with at least two diagnosis of acromegaly (ICD9=2530) reported by an endocrinologist or an internist were selected. Characteristics of the study population are described in terms of age, gender and co-morbidities. Health care resources utilization was estimated, in terms of medical/surgical services, hospitalization, emergency visits and medications. Costs of these resources were estimated annually over a three-year period from the time of diagnosis of acromegaly and from the time of specific intervention (transsphenoidal surgery (TSS) or medical treatment). **RESULTS:** A total of 655 patients had at least diagnosis of acromegaly on two occasions reported by an endocrinologist or an internist. Average age was 49.0(SD=19.1) and 55.4% were females. A pituitary adenoma was reported in 27.0% of patients. During the study period, TSS was performed for 20.3% of patients while 19.7% had a medical treatment. Medical therapy included bromocriptine (9.2%), cabergoline (7.6%), octreotide (7.2%), lanreotide (0.5%) and pegvisomant (0.3%). Annual costs for all patients were \$7,203(SD=\$12,706), \$5,038(SD=\$9,545) and \$5,266(SD=\$12,291) respectively for each of the three year following initial acromegaly diagnosis. For patients who had a TSS or a medical treatment, or a combination of these, total cost in the first year following the initial intervention varies from \$9,925 to \$17,813. The most frequent comorbidities were diabetes (47.6%) and hypertension (42.7%). Sleep apnea and carpal tunnel syndrome were reported in 11.1% and 5.3% of patients respectively. Average annual costs of medications for the treatment of comorbidities were \$1,454(SD=\$3,338). **CONCLUSIONS:** Results of this analysis of the RAMQ database illustrate the significant economic burden of acromegaly and of its comorbidities.

PDB49

COST AND HEALTH CARE RESOURCES UTILIZATION IN THE MANAGEMENT OF CUSHING'S DISEASE: AN ANALYSIS BASED ON THE RAMQ DATABASE

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OBJECTIVES: To estimate the health care resource utilization and costs associated with Cushing's disease (CD) in Québec. **METHODS:** A retrospective cohort study was conducted using data from the Quebec public health plan (RAMQ) from January 2001 to June 2011. Patients with at least two CD diagnoses (ICD9=2550) were initially selected. CD was further confirmed with at least 2 diagnoses of CD reported by an endocrinologist, or a diagnosis of pituitary adenoma, or a transsphenoidal surgery (TSS) or a bilateral adrenalectomy (BLA). Health care resources comprise medical/surgical services, hospitalization, emergency visits and medications. Costs of these resources were estimated annually over a three-year period from the time of diagnosis of CD and from the time of specific intervention (TSS, BLA or medical treatment). **RESULTS:** Of the 810 patients with two diagnoses of CD, 322 were considered confirmed cases of endogenous CD. The average age was 48.0yrs (SD=16.8) and 72.0% were females. During the study period, TSS and BLA were performed for 23% and 21.1% of patients respectively while 11.8% had a medical treatment to control hypercortisolism. Among these patients 5.9% had two interventions and 0.9% had the three interventions. Annual costs for all patients were \$14,451, \$5,737 and \$5,679 respectively for each of the three year following initial CD diagnosis. For patients who had a TSS, or a BLA, or a medical treatment, or a combination of these, total cost in the first year following the initial intervention varied from \$12,258 to \$28,888. The most frequent comorbidities were diabetes (58.4%), hypertension (57.8%), and osteoporosis (51.2%). Patients had numerous comorbidities; 85.1% had 2 or more and 69.0% 3 or more. Average annual costs of medications for the treatment of comorbidities were \$2,252 (SD=\$5,713). **CONCLUSIONS:** Results of this analysis of the RAMQ database illustrate the significant economic burden of CD and of its comorbidities.

PDB50

HEALTH CARE RESOURCE UTILIZATION IN THE MANAGEMENT OF CUSHING DISEASE: AN ANALYSIS FROM SOUTH-WESTERN ONTARIO

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OBJECTIVES: To examine the demographic and clinical characteristics in patients with Cushing's disease (CD) and to estimate the health care resource utilization associated in these patients in Ontario. **METHODS:** Retrospective analysis of resource use captured in the Southwestern Ontario Database from 2001 to June 2011. A total of 86 patients (72% females) were analyzed based on diagnosis, out of a total population of 523,718 patients. A matched control group (CG) (N=86) was also included from the general population. **RESULTS:** Age of patients at the time of diagnosis was 43±25.4 years (mean ± SD). Baseline co-morbidities (CM) included hypertension (67.4%), dyslipidemia (25%), diabetes (23.3%), renal calculi (17.4%), visual disturbance (20.9%), carpal tunnel syndrome (19.8%) and osteoporosis (11.6%). Distribution of co-morbidities was statistically significantly higher than general population (p -value <0.05); 27% had 2 CM and 35% had 3 or more CM. Baseline Urinary Free Cortisol (UFC) level was 207.7± 118.3 nmol/day (UFC ULN= 110 nmol/day). Primary treatment options included transsphenoidal surgery (TSS), bilateral adrenalectomy (BLA), radiosurgery and medical therapy, used in 79%, 6%, 2.3% and 12.7% of patients respectively. Secondary treatment was surgical in 37% of patients: consisting of repeat TSS in 21%, BLA in 10% and RS in 6%, while the majority received medical therapy (63%). Average length of stay for surgery was 6 days (SD=4) and 9 days (SD=7) for TSS and BLA respectively. Medical therapy, prescribed as monotherapy, included ketoconazole (38%), cabergoline (21%), bromocriptine (20%) and mitotane (15%). Health care provider interactions per year for CD post intervention compared to CG were: Emergency Room visit: 1.01 vs. 0.069; clinic visits: 4.86 vs. 1.89; specialist clinic visits: 5.57 vs. 0.92; and hospitalizations: 0.34 vs. 0.15. **CONCLUSIONS:** This retrospective analysis of patients diagnosed with Cushing's disease indicates that they require substantially higher resource use and experience a high burden of comorbidities.

PDB51

RESOURCE UTILIZATION IN THE MANAGEMENT OF ACROMEGALY: AN ANALYSIS FROM SOUTHWEST ONTARIO

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OBJECTIVES: To examine the demographic and clinical characteristics in patients with acromegaly and to estimate the health care resource utilization associated in these patients in Ontario. **METHODS:** Retrospective analysis of resource use captured in the Southwestern Ontario Database from 2001 to June 2011. A total of 131 patients (56% males) were analyzed based on diagnosis, out of a total population of 523,718 patients. A matched control group (CG) (N=131) was also included from the general population. **RESULTS:** Age of patients at the time of diagnosis was 35±25.3 years (mean ± SD). Primary treatment options included transsphenoidal surgery (TSS), radiosurgery and medical therapy, used in 38%, 6% and 56% respectively. Secondary treatment was surgical in 70% of patients: consisting of repeat TSS in 61% and RS in 9%, while 30% received medical therapy. Average length of stay for surgery was 8±8 days in first line TSS. Most frequent post operative complications (>50%) was metabolic-related (81%), gastrointestinal (62%) and fever (38%). Medical therapy, prescribed as monotherapy, included octreotide (47%), lanreotide (33%),